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(71) Applicant (for all designated States except US):  
**STOLLER ENTERPRISES, INC.** [US/US]; 4001 W. Sam Houston Parkway North, Suite 100, Houston, TX 77043 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **STOLLER, Jerry H.** [US/US]; 11907 Churchill Ct., Houston, TX 77024 (US).

(74) Agent: **BROOKHART, Walter, R.**; Shook, Hardy & Bacon, LLP, JPMorgan Chase Tower, Suite 1600, 600 Travis, Houston, TX 77002-2911 (US).

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

## (54) Title: SUPPRESSING PLANT PATHOGENS AND PESTS WITH APPLIED OR INDUCED AUXINS

(57) **Abstract:** The present invention is directed to methods for inhibiting the growth of disease organisms, particularly fungi and bacteria, on plant tissues. The present invention is also directed to methods for inhibiting the infestation of plants by insects and larva, particularly sucking and chewing insects. These methods are achieved by applying an auxin or a plant growth regulator (PGR) which will effect the level of auxin in the plant tissue to the seeds or tubers of the plant prior to planting or to the roots, foliage, flowers or fruit of the plant after planting. The auxin or PGR is applied in an amount effective to inhibit growth of the disease organisms or insects, but in an amount insufficient to negatively effect growth of the plant tissues. The auxin may be applied as a natural auxin, synthetic auxin, auxin metabolite, auxin precursor, auxin derivative or a mixture thereof. The presently preferred auxin is indole-3-acetic acid (IAA). The auxin or PGR may be applied to the seeds, tubers or plant tissues. Seeds or tubers may be sprayed with or immersed in an aqueous solution containing the auxin or PGR. Conventional spraying and drip irrigation systems may be used to apply an aqueous solution containing an auxin or PGR to plant tissues. The auxin or PGR may also be applied to the plant tissues as a powder or may be encapsulated within a biologically compatible material to provide slow release to the roots of the plant. The plant tissues may be dusted with a powder, including the auxin or PGR. The encapsulated auxin may be placed in the root zone for uptake of the auxin or PGR by the roots.

**INTERNATIONAL SEARCH REPORT**

International Application No.

PCT/US04/26700

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : A01N 31/08, 37/10, 43/38, 57/14  
 US CL : 504/101, 194, 284, 317, 336, 354; 514/130, 266, 419, 450, 543, 557, 570, 573, 617, 732, 762  
 According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 504/101, 194, 284, 317, 336, 354; 514/130, 266, 419, 450, 543, 557, 570, 573, 617, 732, 762

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
 none

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
 Please See Continuation Sheet

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CN 1262037A (WEI) 9 August 2000. See entire translation.	1-70
Y	US 4,675,327 A (FREDRICK) 23 June 1987. See columns 1-3 and Example VI.	1-70

<input type="checkbox"/>	Further documents are listed in the continuation of Box C.	<input type="checkbox"/>	See patent family annex.
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"A"	document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E"	earlier application or patent published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
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"P"	document published prior to the international filing date but later than the priority date claimed		

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Name and mailing address of the ISA/US

Mail Stop PCT, Attn: ISA/US  
 Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, Virginia 22313-1450

Faxsimile No. (571) 273-3201

Authorized officer

S. Mark Clardy

Telephone No. 571-272-1600

**INTERNATIONAL SEARCH REPORT**

International application No. .  
PCT/US04/2674002

Continuation of B. FIELDS SEARCHED Item 3:  
WEST: plant hormon-, ethylene, cytokinin, kinetin, gibberellin (+ variants), abscissic, brassinosteroid-, jasmon-, salicyl-, thrip-, thysanopter-, fusarium, rhizoctonia, seed with layer-/coat-/shell-, 2,4-D (+variants), IAA (+variants),